

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A nitride-based semiconductor light-emitting device comprising:

a first conductivity type first nitride-based semiconductor layer formed on a substrate;
an active layer, formed on said first nitride-based semiconductor layer consisting of a nitride-based semiconductor layer;

an optical guide layer formed on said active layer;

a second conductivity type second nitride-based semiconductor layer formed on said active layer;

an undoped contact layer formed on said second nitride-based semiconductor layer; and

an electrode formed on said undoped contact layer, wherein

said undoped contact layer has a thickness of at least about 1 nm and not more than about 10 nm.

2. (Original) The nitride-based semiconductor light-emitting device according to claim 1, wherein

the band gap of said undoped contact layer is smaller than the band gap of said second nitride-based semiconductor layer.

3. (Original) The nitride-based semiconductor light-emitting device according to claim 1, wherein

said second conductivity type second nitride-based semiconductor layer includes a second conductivity type cladding layer consisting of AlGaIn.

4. (Original) The nitride-based semiconductor light-emitting device according to claim 1, wherein

said first conductivity type first nitride-based semiconductor layer is an n-type first nitride-based semiconductor layer, and

said second conductivity type second nitride-based semiconductor layer is a p-type second nitride-based semiconductor layer.

5. (Cancelled)

6. (Original) The nitride-based semiconductor light-emitting device according to claim 1, wherein

said undoped contact layer has a band gap larger than the band gap of said active layer.

7. (Original) The nitride-based semiconductor light-emitting device according to claim 1, wherein

said undoped contact layer contains InGaN.

8. (Withdrawn) The nitride-based semiconductor light-emitting device according to claim 1, wherein

said undoped contact layer contains GaN.

9. (Original) The nitride-based semiconductor light-emitting device according to claim 1, wherein

said undoped contact layer is constituted of a single undoped nitride-based semiconductor layer.

10. (Withdrawn) The nitride-based semiconductor light-emitting device according to claim 1, wherein

said undoped contact layer has a multilayer structure consisting of a plurality of undoped nitride-based semiconductor layers.

11. (Original) The nitride-based semiconductor light-emitting device according to claim 1, further comprising an undoped third nitride-based semiconductor layer, formed at least between said active layer and said second conductivity type second nitride-based semiconductor layer, consisting of a nitride-based semiconductor having a smaller band gap than said second nitride-based semiconductor layer.

12. (Original) The nitride-based semiconductor light-emitting device according to claim 11, wherein

said undoped third nitride-based semiconductor layer is formed only between said active layer and said second nitride-based semiconductor layer in the interspaces between said active layer and said first and second conductivity type first and second nitride-based semiconductor layers.

13. (Withdrawn) The nitride-based semiconductor light-emitting device according to claim 11, further comprising a fourth nitride-based semiconductor layer formed between said active layer and said first conductivity type first nitride-based semiconductor layer, wherein said fourth nitride-based semiconductor layer has a thickness smaller than the thickness of said third nitride-based semiconductor layer.

14. (Original) The nitride-based semiconductor light-emitting device according to claim 11, wherein said second conductivity type second nitride-based semiconductor layer includes a second conductivity type second nitride-based semiconductor layer consisting of AlGa_N, and said undoped third nitride-based semiconductor layer includes an undoped third nitride-based semiconductor layer consisting of Ga_N.

15. (Original) The nitride-based semiconductor light-emitting device according to claim 1, wherein said second conductivity type second nitride-based semiconductor layer includes a second conductivity type cladding layer having a projecting portion, said undoped contact layer is formed on the upper surface of said projecting portion of said second conductivity type cladding layer, and said projecting portion of said second conductivity type cladding layer and said undoped contact layer constitute a ridge portion.

16. (Original) The nitride-based semiconductor light-emitting device according to claim 1, wherein

said active layer includes an active layer consisting of a nitride-based semiconductor containing In,

said nitride-based semiconductor light-emitting device further comprising a protective layer of a nitride-based semiconductor layer formed on said active layer for preventing In contained in said active layer from desorption.

17. (Withdrawn) The nitride-based semiconductor light-emitting device according to claim 1, wherein

said first conductivity type first nitride-based semiconductor layer includes a first conductivity type contact layer, and

said first conductivity type contact layer also has a function for serving as a first conductivity type cladding layer.

18. (Withdrawn) The nitride-based semiconductor light-emitting device according to claim 17, wherein

said substrate includes an insulating substrate.

19. (Withdrawn) The nitride-based semiconductor light-emitting device according to claim 1, wherein

said electrode provided on said undoped contact layer is interdigitally formed.

20. (Withdrawn) The nitride-based semiconductor light-emitting device according to claim 1, further comprising an undoped fifth nitride-based semiconductor layer formed between said substrate and said first conductivity type first nitride-based semiconductor layer.

21. (Withdrawn) The nitride-based semiconductor light-emitting device according to claim 20, wherein

said undoped fifth nitride-based semiconductor layer is constituted of a nitride-based semiconductor having a low dislocation density formed by selective lateral growth.

22. (Withdrawn) The nitride-based semiconductor light-emitting device according to claim 20, further comprising a plurality of mask layers having overhangs formed on said substrate at prescribed intervals, wherein

said undoped fifth nitride-based semiconductor layer is formed by selective lateral growth to fill up clearances between said mask layers.

23. (Original) The nitride-based semiconductor light-emitting device according to claim 1, wherein

said substrate is a first conductivity type GaN substrate.